

# Nico D'Cotta

## Backend Software Engineer

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### EXPERIENCE

06/2020 – today  
intern,  
then part-time,  
then full time,  
then part-time

#### Platform engineer, at **Blockchain.com**

Large crypto finance house (including a wallet and an exchange) with retail and institutional businesses.

Implementing application performance monitoring and performing **production incident response**.

Shipping under time constraints on several large **JVM** (mainly Kotlin) codebases that power the cryptocurrency exchange, the wallet, and crypto brokerage.

Scaling up distributed systems with a **microservices** event-driven architecture.

**Onboarding new engineers** in the team to the complex product and architecture of Blockchain.

Engineering tooling in order to facilitate development and allow for faster iterations.

06/2019 –  
10/2019  
intern

#### Software Engineer, at **Emit, Inc.**

Four-person startup with its own smartwatch aiming to provide time-analytics to institutional customers.

Worked on data analytics, developing a data processing pipeline and libraries in **Kotlin** and **Python** on top of serverless tech on **AWS (Lambda, DynamoDB, ElasticSearch)**.

### EDUCATION

2018 – 06/2022

#### **MEng Computer Science – currently First Class Honours**, at **Imperial College London**

Focus on Software Engineering, Distributed Systems, Network and Computer Security, Systems and Data Scalability, Logic-based AI, Type Systems for Programming Languages, Simulation & Modelling.

Additional Business School modules include Project Management, Finance & Financial Markets, and Business Strategy.

2015-2018

#### **French Baccalaureate (S-SI) – Highest Honours**, at **French Lycée of Madrid**

High-school diploma with **Engineering Sciences with Further Maths** specialisations, and completed optional Portuguese and Music modules.

Extracurriculars include two Model UNs, Drama, Choir, student representative, competing in the basketball team.

### PROJECTS

see my full portfolio at [nico.dcotta.eu](https://nico.dcotta.eu)

AWS (Lambda, DynamoDB, EC2), Kotlin, VueJS, TS

#### **DJStreamr, collaborative streaming service for DJs**

🌐 [djstreamr.com](https://djstreamr.com)

Music synchronisation protocol implemented as a webapp with an event-driven platform architecture which leverages serverless technology.

Kotlin, JVM bytecode, ARM11 assembly

#### **WACC, multiplatform compiler**

🔗 [cottand/WACC](https://cottand/WACC)

Multiplatform compiler from WACC (a toy language) to JVM bytecode and ARM11 64-byte assembly that supports basic constructs like stack-allocated primitives, and heap-allocated arrays and pairs.

C, x86 assembly

#### **PintOS, UNIX-like OS**

🌐 [pintos-os.org](https://pintos-os.org)

Pint-sized OS with features such as advanced scheduling, paging, virtual memory and user programs with support for some of the C stdlib.

Elixir, Paxos

#### **Multi-Paxos**

🔗 [cottand/multi-paxos](https://cottand/multi-paxos)

Implementation of a variation of the Paxos consensus algorithm, as specified in the paper *Paxos Made Moderately Complex*.

### TECHNOLOGIES

**Proficient in** JVM (Kotlin, Java), Gradle

**Experience with** Python, C, Haskell, Typescript, Elixir

AWS (Lambda, DynamoDB EC2, S3, CodeDeploy, API Gateway), Nomad  
gRPC + protobufs, Kafka, Akka, PostgreSQL, Docker, APM, ConcourseCI,  
TravisCI, GitlabCI, React, VueJS

Object-oriented, Functional, Actor-oriented, and Procedural programming.

### HOBBIES

I enjoy DJing as well as kitesurfing and rock climbing!

### LANGUAGES

**English** - bilingual (C2 certification)

**Spanish** - native

**French** - bilingual

**Portuguese** - advanced level

### SKILLS

"Cool under pressure"

"Pleasant to work with"

"Owns solutions and sees them through"

"Aware of product quality"